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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,777	06/26/2003	Jea-Woan Lee	1567.1047	5869
49455	7590	03/13/2006	EXAMINER	
STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			WEINER, LAURA S	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/603,777	Applicant(s) LEE ET AL.	
	Examiner Laura S. Weiner	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 9, 11-13, 22, 32, 34-36, 42-44, 46 and 48-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 14-16, 19-21, 23-26, 29-31 and 41 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 10, 17, 18, 27, 28, 33, 37-40, 45 and 47 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5-04; 8-04; 12-04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-19, 20-51 in the reply filed on 1-20-06 is acknowledged. The traversal is on the ground(s) that Group II claims are similar to Group I claims. This is not found persuasive because Group I claims require a substrate having a mean roughness of 30-4000 Å and Group II, claim 52 does not require a substrate having a mean roughness of the substrate.

The requirement is still deemed proper and is therefore made FINAL.

2. Since the elected species was not found, a negative electrode comprising a substrate comprising a polymer film deposited with metal having a mean roughness of 30-4000 Å and a lithium layer coated on the substrate has been found allowable. The next species searched was a substrate comprising a metal having a mean roughness of 30-4000 Å and a lithium layer coated on the substrate. Therefore claims 1-8, 10, 14-21, 23-31, 33, 37-41, 45, 47 have been examined.

3. Claims 9, 11-13, 22, 32, 34-36, 42-44, 46, 48-62 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 1-20-06.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 6-8, 14-16, 19-21, 23-26, 29-31, 41, are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka (5,462,820).

Tanaka teaches in column 2, lines 29-37, a nonaqueous battery comprising a negative electrode, a positive electrode, a separator, an electrolyte, etc. Tanaka teaches in column 6, that the electrode sheet is pressed and the support is treated to make the surface thereof uneven to improve the adhesion of the electrode material. The surface of the support can be roughened by anodization, etc. and the surface-roughness of the support is on the order of 0.1-10um [1000-100,000 Å]. The negative electrode comprises lithium. Tanaka teaches in column 16, Example 1, a battery comprising a positive electrode current collector comprises aluminum foil and the active material is LiCoO₂; that the negative electrode current collector comprises copper foil and a microporous separator of polypropylene. Tanaka teaches in column 18, claim 2, that the negative electrode active material comprises elemental lithium or alloys, Li-Al alloys, etc.

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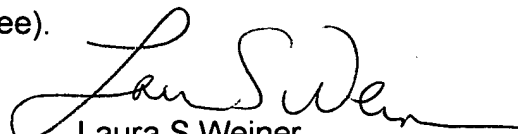
Allowable Subject Matter

6. Claims 4-5, 10, 17-18, 27-28, 33, 37-40, 45, 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura S. Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Laura S Weiner
Primary Examiner
Art Unit 1745

March 6, 2006